

Amendment and Response
Applicant: Michael R. Krause et al.
Serial No.: 09/578,019
Filed: May 24, 2000
Docket No.: 10991834-2
Title: RELIABLE MULTICAST

REMARKS

The following remarks are made in response to the Office Action mailed June 25, 2004. Claims 1-53 were rejected. With this Response, claims 1 and 29 have been amended. Claims 1-53 remain pending in the application and are presented for reconsideration and allowance.

Objections to the Drawings

The Examiner has objected to the drawings because they fail to comply with 37 C.F.R. 1.84(p)(5) because they do not include reference character(s) mentioned in the description.

The Examiner has objected to Figures 4-6 because the figures appear to have been cut off at the far right side of the drawings.

Applicants have submitted Annotated Sheets of the drawings and a set of Replacement Drawings as required by this Office Action.

The annotated sheets of drawings and the set of replacement drawings now include the following reference characters mentioned in the Description: SDR 102; SDR 210; SDR 212; SDR 214; SDR 216; SDR 410; SDR 412; SDR 414; SDR 416; SDR 518; SDR 520; and SDR 522.

The original Figures 4-6 had right margins which apparently caused Figures 4-6 to be cut off at the right side of the drawing at the Patent Office. The set of Replacement Drawings now include proper margins in all of the figures.

In view of the above, Applicants respectfully request that the objections to the drawings be removed.

Claim Rejections under 35 U.S.C. § 112

The Examiner has rejected claims 1 and 23-29 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

With the above amendments to independent claims 1 and 29, the term "SDR resources" has been clarified, such that each SDR implements an independent reliable transport service between the source device and a corresponding one of the multiple

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destination devices in the multicast group. In addition, in independent claim 1, the CS in the source device correlates the independent reliable transport services. In independent claim 29, the method further includes correlating the independent reliable transport services.

In addition, amended independent claims 1 and 29 have clarified that each SDR includes first SDR resources at the source device having at least one queue configured to hold transmitted but not acknowledged units of work; and second SDR resources at the corresponding one of the multiple destination devices in the multicast group having state information including an expected next sequence number value indicating an expected defined order corresponding to a next unit of work to be received.

As clarified, amended independent claims 1 and 29 particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

In view of the above, claims 1 and 23-29 are believed to be in form for allowance. Therefore, Applicants respectfully request that rejections to these claims under 35 U.S.C. § 112, second paragraph, be reconsidered, and that the rejections be removed and that these claims be allowed.

Claim Rejections under 35 U.S.C. § 103

The Examiner rejected claims 1-4, 9-11, 15, 16, 22, 29-33, 41, 42, and 46 under 35 U.S.C. § 103(a) as being unpatentable over Miller et al. U.S. Patent No. 6,151,696 in view of Nessett et al. U.S. Patent No. 5,968,176 in further view of Van Loo et al. U.S. Patent No. 6,064,672.

The Examiner rejected claims 5-8, 18-20, 34-37, and 44 under 35 U.S.C. § 103(a) as being unpatentable over Miller et al. U.S. Patent No. 6,151,696 in view of Nessett et al. U.S. Patent No. 5,968,176 in further view of Van Loo et al. U.S. Patent No. 6,064,672 in further view of Block et al. U.S. Patent No. 6,192,417.

The Examiner rejected claims 12 and 38 under 35 U.S.C. § 103(a) as being unpatentable over Miller et al. U.S. Patent No. 6,151,696 in view of Nessett et al. U.S. Patent No. 5,968,176 in further view of Van Loo et al. U.S. Patent No. 6,064,672 in further view of Hamilton et al. U.S. Patent No. 6,392,993.

The Examiner rejected claims 13, 14, 17, 39, 40, and 43 under 35 U.S.C. § 103(a) as being unpatentable over Miller et al. U.S. Patent No. 6,151,696 in view of Nessett et al. U.S.

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Patent No. 5,968,176 in further view of Van Loo et al. U.S. Patent No. 6,064,672 in further view of Muller et al. U.S. Patent No. 6,256,740.

The Examiner rejected claims 21 and 23 under 35 U.S.C. § 103(a) as being unpatentable over Miller et al. U.S. Patent No. 6,151,696 in view of Nessett et al. U.S. Patent No. 5,968,176 in further view of Van Loo et al. U.S. Patent No. 6,064,672 in further view of VanDoren et al. U.S. Patent No. 6,279,084.

The Examiner rejected claims 24, 26, 27, 47, 51, and 52 under 35 U.S.C. § 103(a) as being unpatentable over Miller et al. U.S. Patent No. 6,151,696 in view of Nessett et al. U.S. Patent No. 5,968,176 in further view of Van Loo et al. U.S. Patent No. 6,064,672 in further view of VanDoren et al. U.S. Patent No. 6,279,084 in further view of Hamilton U.S. Patent No. 6,392,993.

The Examiner rejected claims 25, 48-50 under 35 U.S.C. § 103(a) as being unpatentable over Miller et al. U.S. Patent No. 6,151,696 in view of Nessett et al. U.S. Patent No. 5,968,176 in further view of Van Loo et al. U.S. Patent No. 6,064,672 in further view of VanDoren et al. U.S. Patent No. 6,279,084 in further view of Hamilton U.S. Patent No. 6,392,993 in further view of Miller U.S. Patent No. 5,553,083.

The Examiner rejected claims 28 and 53 under 35 U.S.C. § 103(a) as being unpatentable over Miller et al. U.S. Patent No. 6,151,696 in view of Nessett et al. U.S. Patent No. 5,968,176 in further view of Van Loo et al. U.S. Patent No. 6,064,672 in further view of Mallory U.S. Patent No. 6,335,933.

The Examiner rejected claim 45 under 35 U.S.C. § 103(a) as being unpatentable over Miller et al. U.S. Patent No. 6,151,696 in view of Nessett et al. U.S. Patent No. 5,968,176 in further view of Van Loo et al. U.S. Patent No. 6,064,672 in further view of Block U.S. Patent No. 6,192,417 in further view of VanDoren et al. U.S. Patent No. 6,279,084.

Amended independent claims 1 and 29, as clarified, include limitations which are not taught or suggested by the cited references alone or in combination.

The cited references do not teach or suggest the data processing system of independent claim 1, which includes the following limitations. Multiple SDRs, where each SDR implements an independent reliable transport service between the source device and a corresponding one of the multiple destination devices in the multicast group for delivery of the first unit of work stream at the corresponding one of the multiple destination devices and

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guarantees strong ordering of the first unit of work stream received at the corresponding one of the multiple destination devices. Each SDR includes first SDR resources at the source device having at least one queue configured to hold transmitted but not acknowledged units of work and not yet transmitted units of work. Each SDR further includes second SDR resources at the corresponding one of the multiple destination devices having state information including an expected next sequence number value indicating an expected defined order corresponding to a next unit of work to be received. CS in the source device correlates the independent reliable transport services.

The cited references do not teach or suggest the method of amended independent claim 29 which includes the following limitations. Establishing multiple SDRs, each SDR including first SDR resources at the source device having at least one queue for holding transmitted but not acknowledged units of work and not yet transmitted units of work. Each SDR further includes second SDR resources at a corresponding one of multiple destination devices participating in the multicast group having state information including an expected next sequence number value indicating an expected defined order corresponding to a next unit of work to be received. Implementing corresponding multiple independent reliable transport services with the multiple SDRs. Each independent reliable transport service being implemented between the source device and the corresponding one of multiple destination devices. Multicasting the reproduced first unit of work stream with the multiple independent reliable transport services. Correlating the independent reliable transport services. Guaranteeing strong ordering of the first unit of work stream received at the corresponding one of multiple destination devices.

In view of the above, independent claims 1 and 29 are not taught or suggested by the cited references. In addition, as dependent claims 2-28 further define patentably distinct independent claim 1, and as dependent claims 30-53 further define patentably distinct independent claim 29, these dependent claims are also believed to be allowable.

Therefore, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejections to claims 1-53, and request allowance of these claims.

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CONCLUSION

In view of the above, Applicant respectfully submits that pending claims 1-53 are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 1-53 is respectfully requested.

No fees are required under 37 C.F.R. 1.16(b)(c). However, if such fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 08-2025.

The Examiner is invited to contact the Applicant's representative at the below-listed telephone numbers to facilitate prosecution of this application.

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Any inquiry regarding this Amendment and Response should be directed to either Patrick G. Billig at Telephone No. (612) 573-2003, Facsimile No. (612) 573-2005 or William J. Streeter, Esq. at Telephone No. (970) 898-7247, Facsimile No. (970) 898-3886. In addition, all correspondence should continue to be directed to the following address:

Hewlett-Packard Company
Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 80527-2400

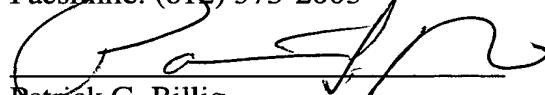
Respectfully submitted,

Michael R. Krause et al.

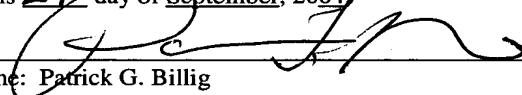
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CERTIFICATE UNDER 37 C.F.R. 1.8: The undersigned hereby certifies that this paper or papers, as described herein, are being deposited in the United States Postal Service, as first class mail, in an envelope address to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 27 day of September, 2004.

By 
Name: Patrick G. Billig

ANNOTATED SHEET SHOWING CHANGES
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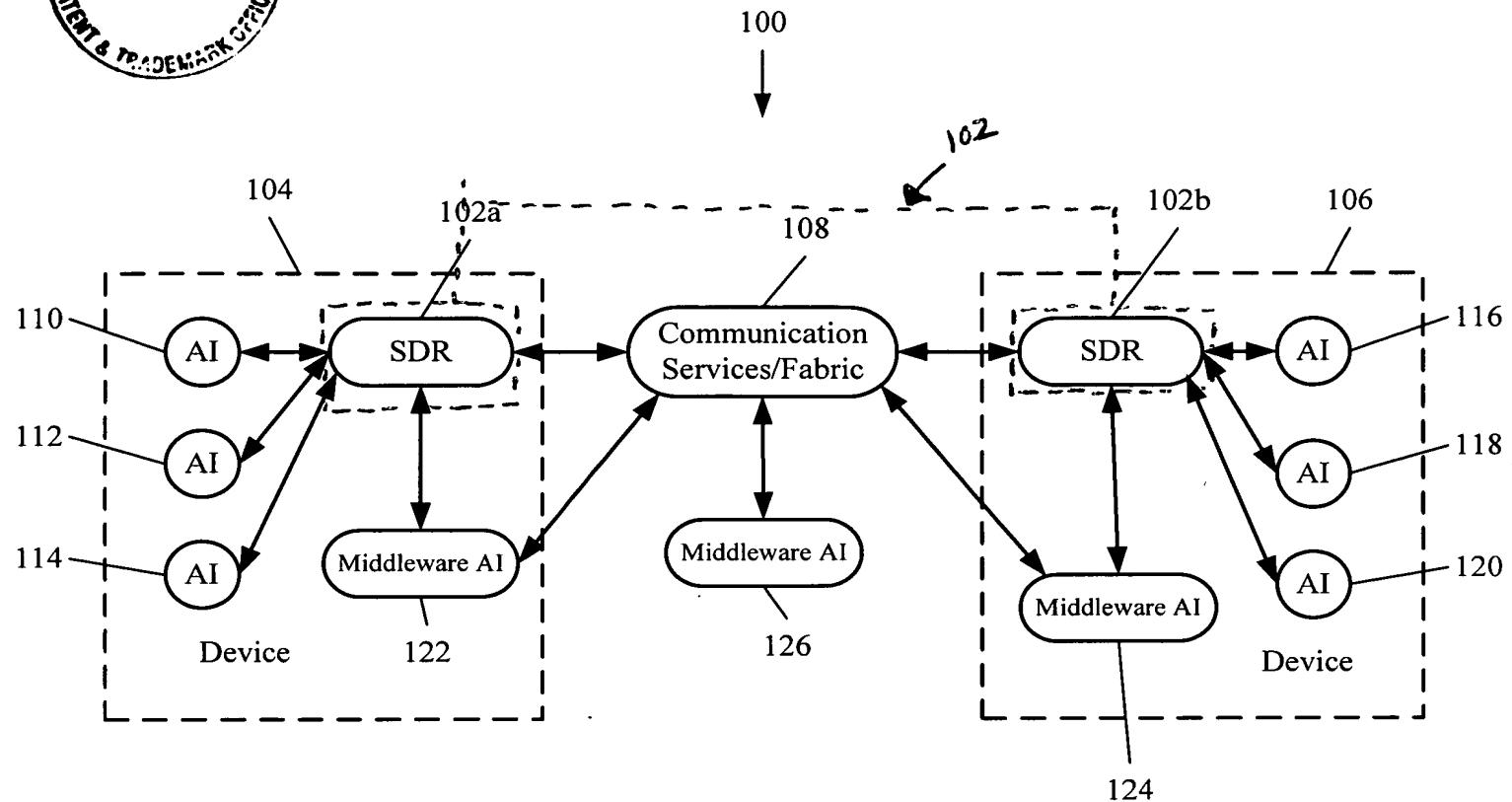
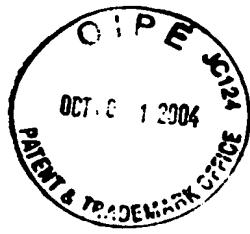


FIG. 1

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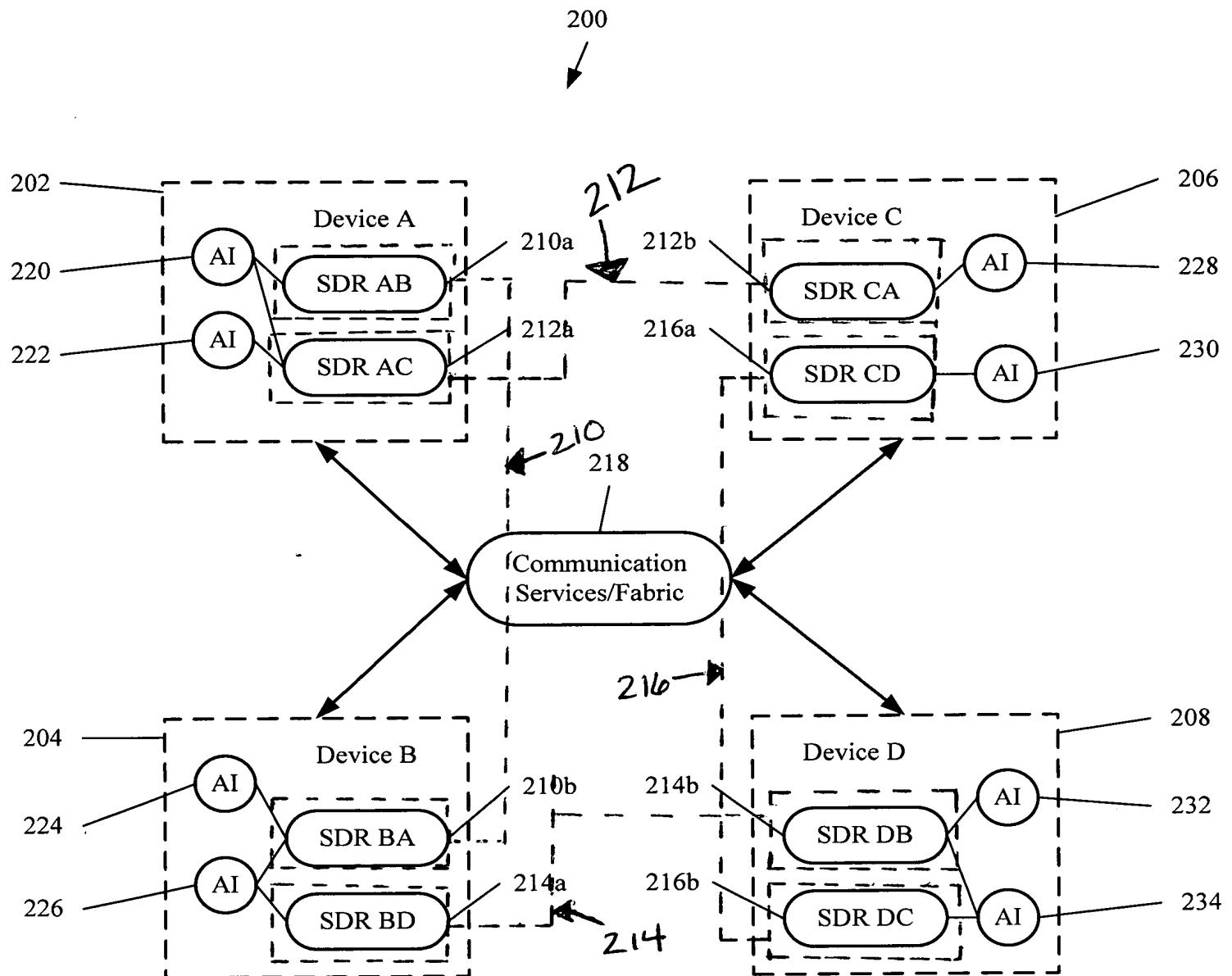


FIG. 2



ANNOTATED SHEET SHOWING CHANGES
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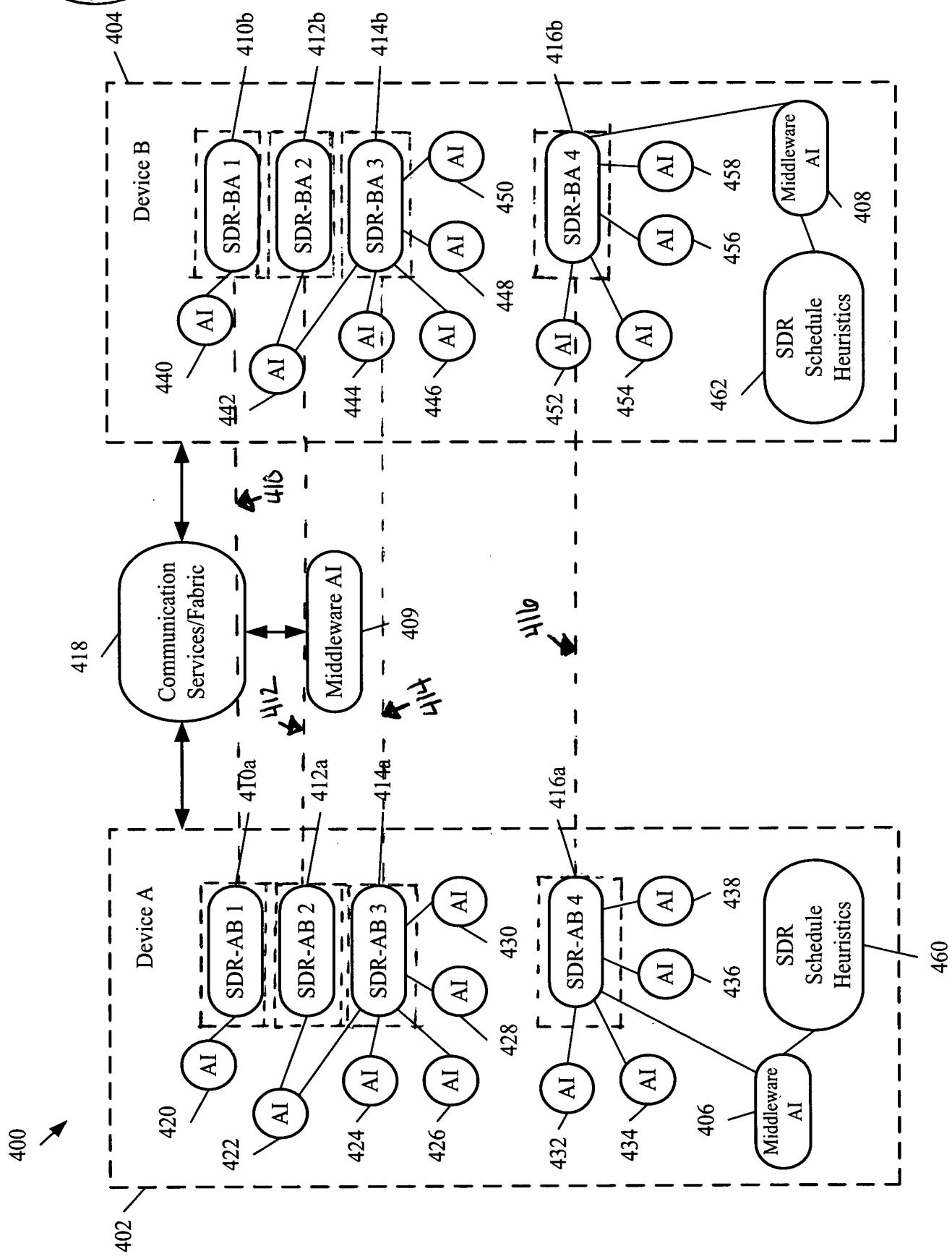


FIG. 7

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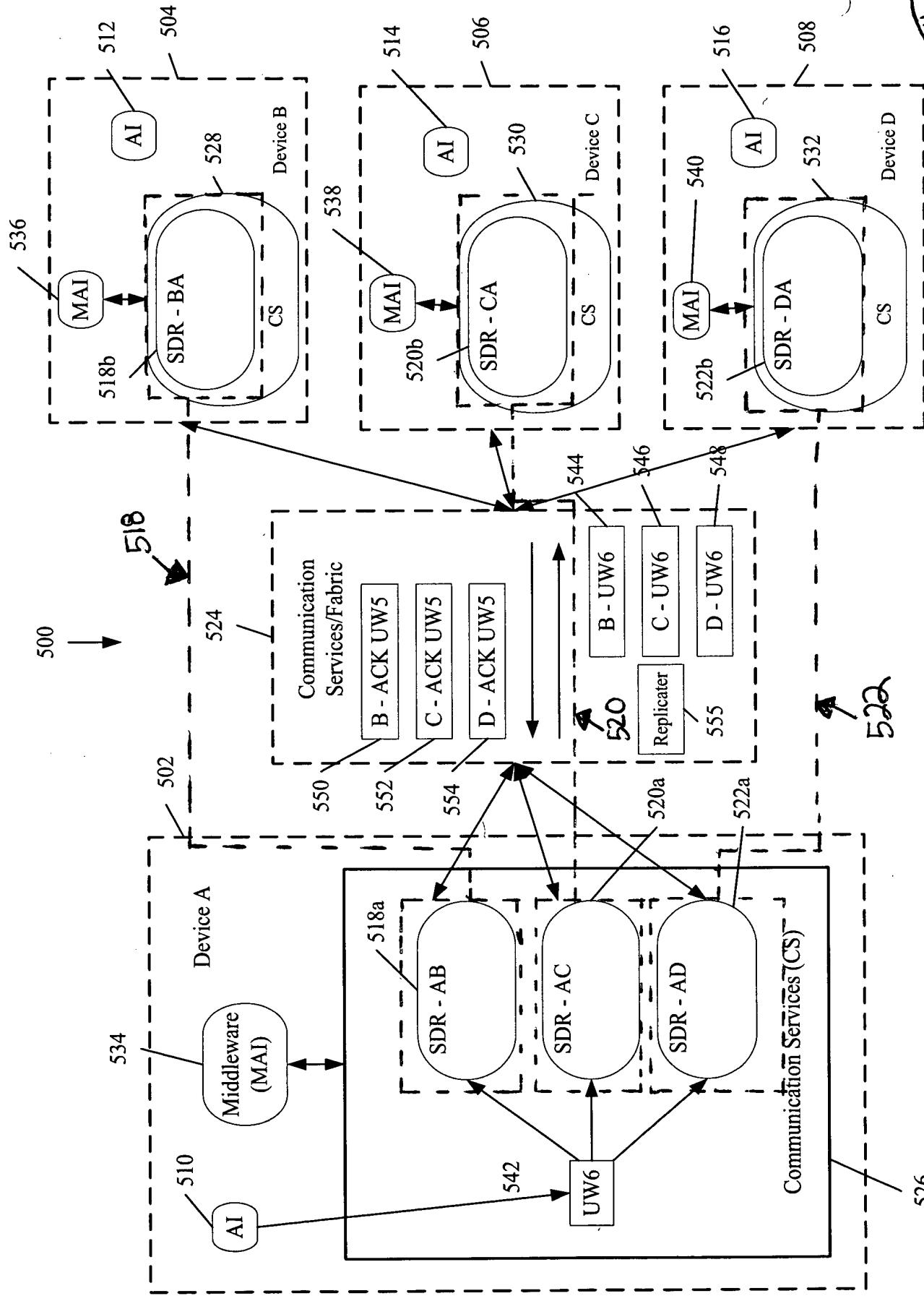


FIG. 8

